

MAGNETIC SENSOR

ABSTRACT OF THE DISCLOSURE

A coil is operatively associated with a magnetic circuit of a vehicle body, and is adapted to cooperate with a time-varying magnetic flux in the vehicle body that is responsive to a condition of the vehicle body sensed by the magnetic sensor. An electrical circuit is operatively coupled to the coil, and the coil in cooperation therewith exhibits a resonant or near-resonant condition in association with the time-varying magnetic flux for at least one condition of the vehicle body. In one embodiment, a signal from an oscillator is applied to the series combination of a capacitor and the coil, which generates an oscillatory magnetic flux in the magnetic circuit. In another embodiment, a second capacitor is connected in parallel with a second coil which operates in a resonant or near-resonant condition responsive to the oscillatory magnetic flux in the magnetic circuit.